

CLAIMS:

1. A durable self-adhesive laminate in roll, sheet or fan-fold form for use as a support for labeling and re-labeling of objects such as containers and the like, said laminate comprising:

5 (a) a thermoplastic resin film having (A) a label-receiving side and (B) an adhesive side, said label-receiving side consisting of a controlled-release surface without making use of a coated release substance and adapted to support a removable label attachable thereto by means
10 comprising attraction forces between the resin film and said label;

(b) an adhesive having an ultimate release energy level greater than the attraction forces between the resin film and a removable label or labels, said adhesive being
15 situated on the adhesive side of said resin film; and,

(c) optionally, a temporary backing in contact with the adhesive, said backing being adapted subsequently to be stripped from contact with the adhesive, whereby the support is suitable for mounting on an object to
20 be labeled or re-labeled, after first having stripped any optional temporary backing therefrom, and any label or labels may, at the option of the user, be affixed to the label-receiving side and later separated from the resin film at a release force that effectuates such separation,
25 without, at the same time, stripping the resin film from the object to be labeled or re-labeled.

2. The laminate as defined in claim 1 wherein the removable label or labels comprise pressure-sensitive adhesive-backed label or labels.

3. The laminate as defined in claim 1 wherein the release force between the casting substrate and the resin film having the controlled-release surface without making

5 use of a coated release substance is about 5 to about 100
grams per inch width, and the adhesion energy level of the
adhesive is greater than the release force between the label
or labels and the resin film having the controlled-release
surface without making use of a coated release substance.

4. The laminate as defined in claim 3 wherein the
release force between the label or labels and the resin film
having the controlled-release surface without making use of
a coated release substance is about 20 to about 60 grams per
5 inch width.

5. The laminate as defined in claim 1 wherein the
label or labels comprise paper or a polymer film.

6. The laminate as defined in claim 5, wherein the
polymer is selected from polyethylene, polypropylene,
poly(vinyl chloride), polyester, polyurethane, polyacrylate,
polycarbonate, polyamide, polystyrene, fluoropolymer or a
5 blend comprising any of the foregoing.

7. The laminate as defined in claim 1 wherein the
resin film (a) comprises poly(tetrafluoroethylene).

8. The laminate as defined in claim 1 wherein the
resin film (a) is a composite of resin layers, the composite
having (i) a label- receiving side comprising
poly(tetrafluoroethylene) and (ii) an adhesive side
5 comprising polyethylene, polypropylene, poly(vinyl
chloride), polyester, polyurethane, polyacrylate,
polycarbonate, polyamide, polystyrene, fluoropolymer or a
blend comprising any of the foregoing.

9. A process for the preparation of a durable self-
adhesive laminate in roll, sheet or fan-fold form for use as
a support for labeling and re-labeling of objects such as
containers and the like, said process comprising:

5 (1) providing a thermoplastic resin film having (i) a
label-receiving side and (ii) an adhesive side, said label-

receiving side consisting of a controlled-release surface without making use of a coated release substance and adapted to support a removable label attachable thereto by means comprising attraction forces between the resin film and said label substrate;

(2) locating on the adhesive side of said resin film an adhesive having an ultimate release energy level greater than the attraction forces between the resin film and a removable label or labels; and

(3) optionally, providing a temporary backing in contact with the adhesive, said backing being adapted subsequently to be stripped from contact with the adhesive, thereby providing a support suitable for mounting on an object to be labeled or re-labeled, after first stripping any optional temporary backing therefrom, and affixing any label or labels, at the option of the user, to the label-receiving side and later separating from the resin film at a release force effecting such separation, without, at the same time, stripping the resin film from the object to be labeled or re-labeled.

10. The process as defined in claim 9 wherein the removable label or labels comprise pressure-sensitive adhesive-backed label or labels.

11. The laminate as defined in claim 9 wherein the release force between the casting substrate and the resin film having the controlled-release surface without making use of a release substance is about 5 to about 100 grams per inch width, and the adhesion energy level of the adhesive is greater than the release force between the label or labels and the resin film having the controlled-release surface without making use of a coated release substance.

12. The process as defined in claim 11 wherein the release force between the label or labels and the resin film

having the controlled-release surface without making use of a coated release substance is about 20 to about 60 grams per inch width.

13. The process as defined in claim 9 wherein the label or labels comprise paper or a polymer film.

14. The process as defined in claim 13, wherein the polymer is selected from polyethylene, polypropylene, poly(vinyl chloride), polyester, polyurethane, polyacrylate, polycarbonate, polyamide, polystyrene, fluoropolymer or a blend comprising any of the foregoing.

15. The process as defined in claim 9 wherein the resin film (a) comprises poly(tetrafluoroethylene).

16. The process as defined in claim 9 wherein the resin film (a) is a composite of resin layers, the composite having (i) a label- receiving side comprising poly(tetrafluoroethylene) and (ii) an adhesive side comprising polyethylene, polypropylene, poly(vinyl chloride), polyester, polyurethane, polyacrylate, polycarbonate, polyamide, polystyrene, fluoropolymer or a blend comprising any of the foregoing.

17. A method of labeling or relabeling an object comprising:

- a) providing a laminated support structure for pressure-sensitive adhesive-backed labels, said support structure comprising a thermoplastic resin film ^{comprising a poly(tetrafluoroethylene) resin} having (A) a label-receiving side and (B) an adhesive side, said label-receiving side consisting of a controlled-release surface without making use of a coated release substance and adapted to support a removable label attachable thereto by means
- comprising attraction forces between the resin film and said label substrate having a release coated face and an adhesive coated face, and a liner covering said adhesive coating;
- b) removing said liner from said adhesive coated face;

- 15 c) substantially permanently attaching the support structure
to the object by adhering said laminated support structure
to said object using said adhesive coated face; and
d) placing a pressure-sensitive adhesive coated label on
said label-receiving side consisting of said controlled-
20 release surface without making use of a coated release
substance of said support structure.

18. A method as defined in claim 17, including the step
comprising:

e) removing said label from the support structure while
leaving the support structure adhered to the object.

19. A process as defined in claim 18, including the
step comprising

- 5 f) replacing said label with another adhesive coated label
having different indicia printed thereon by adhering the
adhesive coating of said another label to the said label-
receiving side consisting of said controlled-release surface
without making use of a coated release substance of said
support structure.

20. The process of claim 17 wherein the object is a
product container.